



Health Data: A National Perspective

Reliable and timely health facility, medical equipment, health service, demographic and related data is the foundation of any state health plan. Similar data is fundamental to the successful operation of an integrated certificate of need program. The following information was gathered from national expert interviews and research, reviews of a variety of nationally-known health data references, and examination of web-based resources on this topic. It is presented for Task Force consideration in the development of recommendations related to data system support for an improved CON program.

Interview Results Regarding Model Health Data Systems:

Interviews were held with a number of experts in the field of public and private health data collection, evaluation and dissemination, including:

- Garland Land, Executive Director, National Association for Public Health Statistics and Information Systems (NAPHSIS)
- Denise Love, Executive Director, National Association of Health Data Organizations (NAHDO)
- Kenneth L. Kuebler, Executive Vice President, Health Industry Data Institute (HIDI), Missouri Hospital Association

One of these national interviewees referenced the 1998 “Ambulatory/Outpatient Data System Feasibility Study” provided to the Washington Legislature by the Department of Health, Office of Hospital and Patient Data Systems. This report was cited as providing fundamental considerations when authorizing an ambulatory/outpatient data system

In discussing the status of “model” health data systems in the United States, much was said about the excellence of public health data systems like vital records, immunizations and others. The frustration has been with gaining sufficient cooperation with private providers, particularly in outpatient and freestanding settings, to secure comparable comprehensive private health data. Maryland and Maine were identified as two states where major advances have been made in the procurement of this private health data.

All interviewees were familiar with the Washington CHARS system. All were also complimentary of its design and capabilities, and pointed to potential future capacity and utilization of the CHARS system. Without hesitation, they expressed belief that this system is currently a model for hospital data acquisition. They also expressed their belief that the existing system could be easily and comparatively inexpensively expanded to accommodate data from a variety of health delivery venues. They proposed that such settings, with modifications to the

required UB-04 data set, could include emergency departments, ambulatory surgery centers, diagnostic imaging centers, radiation treatment centers, and related components. (UB-04 is a uniform billing data system that replaces UB-92 standard institutional billing forms, will accommodate ICD-10 code sets, and is aligned with the HIPAA standard claim format.)

Additional Details Regarding the 1998 Ambulatory/Outpatient Data System Feasibility Study:

The seven categories of recommendations within the report have been summarized as follows:

1. Overall Considerations

Collecting ambulatory/outpatient data is definitely feasible and provides useful information. There are many viable approaches to collecting ambulatory/ outpatient data, as demonstrated by the diversity of systems seen in other states. Making these data available would improve the ability of public and private sector managers to efficiently address the health needs of Washington residents. ***A statewide ambulatory/outpatient data system also levels the playing field*** within the health industry by giving access to these data to all parties, promoting the public good through improved access to information.

2. Recognize the Lessons from Other States

The creation and on-going operation of ambulatory/outpatient data systems has been a success in nearly twenty other states, meeting the information needs of a wide range of data users. Mandated systems are essential, to protect personal privacy and obtain complete data. The costs for collecting data and disseminating information can range considerably, depending primarily on the volume of data collected by the system. No state is attempting to collect all ambulatory/outpatient data for all settings and all payers. ***Starting small, with a manageable set of data suppliers and clearly defined data elements, is important for success.*** The initial year's data is often burdened with reporting errors, incomplete data, and other start-up concerns that take a few months to resolve. Also, the sheer volume of data can be overwhelming if not anticipated. Collecting data about physician office practice has been both costly due to the added reporting burden and technically challenging. Ensuring the confidentiality of identifiable patient data is also critically important, and definitely achievable.

3. Basic System Recommendations

The recommended basic system is based on billing data only, as expanded over time by national standardization efforts. Creating a statewide, patient-level ambulatory/outpatient system based on special surveys is not recommended. Both provider-based and payer-based data systems have value, and each allows answering different types of important questions. ***Provider data is recommended as the first priority to collect because it covers all patients treated in the selected settings and due to lower data processing costs and a more manageable data set.*** Initially (phase I), collect provider-based data only from limited settings of care: hospital outpatient, services, ambulatory surgical centers, and possibly some of the larger clinics. Expand the number of provider settings over time (phase 2) to include more settings as appropriate and feasible. Eventually (phase 3), consider adding paid claims data, at least from the public payers such as Medicare, the Health Care Authority, Medicaid, and

Labor & Industries, to improve the system's ability to measure health status. Implement the system slowly, and quantify the information value at each step through an evaluation process, rather than adding the delays and extra costs of having a formal pilot study conducted as a precursor to developing the system.

4. Recommended System Details

The most value will be obtained from focused data. At least initially, do not collect data about routine x-ray and lab services. Similarly, and due to the added reporting burdens it would impose, do not collect data from physician offices, home care services, or pharmacies as part of the initial system. In designing the provider-based system, work in conjunction with an industry advisory group to specify which settings to include and whether to collect all or some conditions and services. ***Make the reporting burden as minimal and cost effective as possible.*** If sufficient funding is available, help some of the smaller providers cover the costs of their system changes. In considering the added value of a second priority, payer-based system (phase 3), start with public payers, clearly demonstrate that the added value of the data exceeds the added costs, and consider expanding the system to include private sector payers' data only if it is clearly valuable to do so.

5. Dissemination Recommendations for Protecting Confidential Data

Collect a unique patient identifier, potentially using source encryption or other techniques to preserve patient confidentiality. Do not release directly or indirectly identifiable patient information at any time, except following IRB review and approval. Collect and release health facility and insured health plan identifiers. Collect but do not initially release unencrypted physician and other practitioner identifiers. Have data suppliers re-code self-funded employer plan identifiers into a generic category prior to submission. In designing state regulatory requirements to protect confidential data, ***start with the current inpatient data requirements and modify them to ensure both civil and criminal penalties for misuse of data.*** Any ambulatory/outpatient data system implemented in Washington cannot include data prohibited by state or federal law, and should be compatible with federal administrative simplification requirements and other relevant federal legislation as appropriate. Adopt national standards for data elements as they become available.

6. Other Information Dissemination Recommendations

Produce limited summary reports, similar to the current inpatient summaries, with a special focus on information for consumers and data suppliers. Produce multiple public use files, on a timely basis, to facilitate easier use of voluminous data.

7. System Governance and Financing

A key issue is how to best spread the burden of paying for the system. These options are analyzed on pages 35-40 of the report. The ambulatory/outpatient data system should be state-governed, with an advisory council of data suppliers and users. ***Fund initial development of the system with State general funds, offset by grant funding where available.*** Fund on-going operations of the system through user fees and an assessment on data suppliers to assure stable funding over time.

Additional Details Regarding Maine Health Data Processing Center:

The Maine system resulted from legislation passed in June of 2001 creating the Maine Health Data Processing Center (a public/private partnership between the Maine Health Data Organization [MHDO] and the Maine Health Information Center. This system has added “all payers, all provider claims” databases as a way to acquire actual payment information from the third-party payers. Reportedly they now have almost 98% participation. Current efforts reportedly include gaining a more complete picture through matching of charge information with the payment information.

The Maine methodology is available “at a most reasonable price through a licensing arrangement” according to an MHDO representative. Reportedly, this methodology has been implemented in at least 17 additional states.

Additional Details Regarding the Washington Comprehensive Hospital Abstract Reporting System (CHARS):

The Comprehensive Hospital Abstract Reporting System (CHARS) system was established in law by the 1984 Legislature. ESB 6152. in October 1989, authorized the Department of Health to conduct hospital-based data collection, storage and retrieval systems.

The CHARS system was authorized under Revised Code of Washington (RCW) 43.70.052 (Appendix B). It is currently implemented by Washington Administrative Code (WAC) 246.455. The Office of Hospital and Patient Data Systems (HPDS), Department of Health, is responsible for performing this function. The stated mission of HPDS is to collect, maintain, analyze, and disseminate hospital patient discharge and financial utilization data that are useful in conducting public health work and in improving the quality and cost effectiveness of health care for all people in the state of Washington. This database is also used to collect public information such as the age, sex, zip code and billed charges of the patient, as well as the codes for diagnosis and procedures. The purpose of the CHARS system is to provide public health personnel, consumers, purchasers, payers, providers, and researchers with useful information to make informed decisions on health care. The CHARS system provides those concerned with the development of public policy with information necessary to analyze many significant health care issues. Currently, the Department of Health uses the CHARS data system to:

- identify and analyze health trends related to patients’ hospitalizations;
- establish statewide diagnosis related groups (DRG) weights;
- create hospital specific case mix indices; and
- identify and quantify issues related to health care access, quality, and cost containment.

The reported capabilities and expandability potentials of CHARS were confirmed through discussions with the leadership of CHARS. Larry Hettick, Hospital and Patient Data Systems, Center for Health Statistics, Washington State Department of Health, explained the system’s functionality and scalability and its capability for expansion if desired. It now has a complete data input array including online web access and electronic data transfer, in addition to manual input (see sample screen below):

CHARS - Inpatient Discharge Record : Build ver 1.4 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://localhost/chars/Main.aspx?xstack=0&xnavigate=push&xaction=get&id=1548318&xpage=CorrectIDR_Edit#

CHARS Training System Operations Reports Administration Help Drop Notes

Inpatient Discharge Record

IDR ID 1548318
 HPDS Record Key 1548318
 Hospital Evergreen Hosp Med Ctr
 PCN 1548318
 Patient Name (Identifier) [REDACTED]
 Birthdate 08/04/1928
 Sex M
 Admission date 09/29/2004
 Discharge date 09/30/2004
 LOS 1

DELETE CANCEL SAVE PRINT THIS IDR SAVE WITH ERRORS

Patient	Revenue	Dx/Px/Physicians
67. Principal Dx 1550	68. Other Dx 5715	69. Other Dx 7895
70. Other Dx	71. Other Dx	72. Other Dx
73. Other Dx	74. Other Dx	75. Other Dx
77. E-Code		
80. Principal Proc 5094	81A. Other Proc 9925	81B. Other Proc
81C. Other Proc	81D. Other Proc	81E. Other Proc
82. Attending Physician E99607	83. Other Physician E99607	

FIND FIND

Audit Errors OPEN ERRORS FORCED ERRORS

Status	Error Code	Description	Value
0			

start Document... CHARS - I... My Docu... CHARS - ... Local intranet 10:25 AM

(personal identification obscured to protect patient privacy)

It is a very interactive system designed for efficient and effective input. The output of the system has great versatility yielding diverse data. An example of the data elements collected through this process is shown below:

Public (Demographic/Clinical) and Revenue Data File Layout -- 1987 through 2005

Available in the following formats: Text (ascii) flat-file, dbf4, SAS)

Hospital Number	Procedure 2
Number of Revenue Items Used	Procedure 3
Zipcode	Procedure 4 (Not used 1987-1992)
Age	Procedure 5 (Not used 1987-1992)
Sex	Procedure 6 (Not used 1987-1992)
Discharge Date	Primary Physician ID
Length of Stay	Secondary Physician ID
Type of Admission	DRG Code
Source of Admission	MDC Code
Discharge Status	Average Length of Stay
Total Charges	DRG Weight
Payer ID 1	Outlier Code
Payer ID 2	E Code 1 (No values 1987-1988, 1993 forward)
Diagnosis 1	E Code 2 (No values 1987-1988, 1993 forward)
Diagnosis 2	Refined DRG Code (No values 1987-1991, 2003 forward)
Diagnosis 3	Refined DRG Weight (No values 1987-1991, 2003 forward)

Diagnosis 4	Line Item (01 - 40) Number
Diagnosis 5	Line Item (01 - 40) Revenue Code
Diagnosis 6 (Not used 1987-1992)	Line Item (01 - 40) Units of Service
Diagnosis 7 (Not used 1987-1992)	Line Item (01 - 40) Charges
Diagnosis 8 (Not used 1987-1992)	Sequence Number
Diagnosis 9 (Not used 1987-1992)	State of Residence
Procedure 1	WA County of Residence

Observations and Conclusions:

With the CHARS data system, it appears that the State of Washington has a solid foundation upon which to build a reliable data structure, at least for the items to be reviewed by the Certificate of Need Program, and probably well beyond for a state health plan. Advanced data models are already available to reach toward. Leading experts in the field have expressed an interest in helping, if needed. The establishment of a comprehensive data system vision and funding mechanism is the next step in moving this process forward.